

Compatibility Determination

Station Name: Chincoteague NWR

Date Established: May 13, 1943

Establishing Authority:

Migratory Bird Conservation Act

Purpose(s) for which Established:

For use as an inviolate sanctuary, or for any other management purpose for migratory birds.

Description of Proposed Use: Off Road Vehicles

The use of off road vehicles (ORVs) is permitted on 1.5 miles of ocean beach from March 15 through August 31 and 4.0 miles of ocean beach from September 1 through March 14. Details of this use are covered in the 1988 Environmental Assessment for the Management of Piping Plover on Toms Cove Hook. ORV use is also covered in the 1992 Final Environmental Impact Statement for the Chincoteague National Wildlife Refuge Master Plan (FEIS) and the 1993 Chincoteague National Wildlife Refuge Master Plan. These three documents are appended for additional information.

ORV use was one of the first recreational activities allowed on the beach at Chincoteague Refuge. Prior to opening of the refuge to the public via the Assateague bridge in November 1962, ORVs were the only land transportation that could be utilized because of the exceedingly poor condition of the access roads and because only the sandy beach was open for public use. Fisherman were ferried from the mainland to the Maryland portion of Assateague Island and would cross the Virginia line to gain access to favorite fishing sites. At that time the entire 17 miles of refuge beach was open to vehicular traffic. Restriction of ORV traffic was first enacted in 1960 with the construction of the northern refuge boundary fence at the MD/VA line, thus preventing the crossing of ORVs from Maryland into the refuge. Upon completion of the Assateague bridge in 1962 the southern five miles of refuge was opened to ORV traffic. Beach buggy rentals were available by the hour or the day during the summer of 1964. Rentals were managed by the Assateague Bridge and Beach Authority which had been authorized in 1957 by the Public Law 85-57, Chincoteague National Wildlife Refuge Bridge and Road Act. In 1965 the restriction of ORV travel was extended one mile south leaving only four miles of beach open to vehicular traffic. In 1976 further restrictions were placed on ORVs: a \$5.00 ORV permit was established; vehicle standards were set; and a 42 vehicle limit (allowed on the beach at any one time) was initiated. A one-off, one-on policy became effective when the limit was reached. Despite the restrictions placed on ORV access, their use increased steadily. In 1969(the first year of record keeping) 1,873 visits were attributed to ORVs on the beach. By 1981 this use had increased to 12,897 visits. By 1981 the annual fee had increased to

\$15.00 and a \$10.00 fee for a seven-day permit. In 1986 the annual fee was increased to \$30.00 and in 1988 the seven-day permit was eliminated. Also in 1988, to provide protection for nesting piping plovers, a 2.5 mile portion of the ORV zone was closed to all public use from March 15 through August 31. During this time period the number of vehicles is limited to a maximum of 18 at any one time. This management action was carried out following public review and comment and subsequent approval in March, 1988 of an Environmental Assessment for the Management of Piping Plover on Toms Cove Hook(appendex). Included as a part of that Environmental Assessment is the Documentation of Compliance for Proposed Action Alternative with Off-Road Vehicle Executive Orders. The management of ORVs on the refuge was further addressed in the August, 1992 Final Environmental Impact Statement for the Chincoteague National Wildlife Refuge Master Plan(appendex) which received extensive public review and input. This closure and vehicle limitation remain in effect and are in compliance with the refuge Master Plan(appendex) which was approved in December, 1993. As a result of the closure, use in 1988 dropped to 9,583 visits, but by 1993 it had rebounded to a total of 12,140 visits. In 1993 the fee was raised to \$40.00 and remains at that rate.

In 1965, Congress established the Assateague Island National Seashore (AINS), encompassing Chincoteague Refuge as well as the northern portion of Assateague Island. The legislation provided for primary management of the refuge for wildlife and secondarily for public use. A 1979 Memorandum of Understanding between the National Park Service, the agency charged with administration of AINS, and the Fish and Wildlife Service assigned administration of public use of the refuge's Toms Cove Hook portion to the National Park Service, while the Fish and Wildlife Service retained wildlife management responsibility on the Hook. In 1990, agency responsibilities were further refined in a revised Interagency Agreement(appendex) pertaining to the administration, development, and use of the Toms Cove Hook Area within the Chincoteague National Wildlife Refuge-Assateague Island National Seashore. As a part of this agreement, the National Park Service manages ORV use within the Toms Cove Hook assigned area.

Anticipated Impacts on Refuge Purpose(s):

The proposed use will intermittently interrupt the feeding habits of a variety of shorebirds, gulls, and terns. Surveys conducted during the period 1990 - 1993 show an average peak population of 2,000 shorebirds, 370 gulls, and 60 terns along the stretch of beach affected by this activity. For each group the highest peak numbers occurred in the month of August totalling 4,900, 600, and 180 respectively. Of the total for shorebirds about 85 % were sanderlings which arrive in early spring and normally linger into December. Gull species included predominantly laughing and great black-backed gulls while royal and common terns were found using the area.

Studies have shown that beach use including use of ORVs negatively impacts productivity of beach-nesting birds, particularly the threatened piping plover. Vehicles have been shown to crush eggs, adults, and chicks (Wilcox 1959; Tull 1984; Burger

1987; Patterson et al. 1991; Shaffer and Laporte 1992). Goldin (1993) documented 34 chick mortalities due to vehicles. Patterson et al. (1987) documented one case of piping plover nest failure on the refuge Hook due to crushing by a vehicle. Cairns (1977) found reproductive success of piping plovers was 1.3 to 2.1 fledged young per pair on remote beaches but only 0.7 to 1.1 fledged young per pair on beaches used for recreation in Nova Scotia. Fleming (1984) calculated that fledgling success per nest attempt on beaches in Nova Scotia was significantly reduced from 1.8 to 0.5 young per pair for birds exposed to low and high recreational activity, respectively. He defined low activity as 0-20 visits per week and high activity as 30 or more visits per week by people and their vehicles. Fleming also found that piping plover chick survivorship was significantly decreased by higher levels of recreational activity. His results showed that most chick loss occurred between the ages of 10-17 days; he speculated that high levels of recreational activity caused mortality of chicks by interfering with feeding during a critical period of energy demand. MacIvor et al. (1987) observed piping plovers on North Beach in Chatham, MA. Following separation from the mainland during a 1987 storm, this area, which had received extensive ORV use, became inaccessible to vehicles. In 1987, 50% of plover pairs shifted their nest sites to areas that were not available for nesting in 1985 or 1986 due to ORV traffic. Further, all three least tern colonies were also in locations that were formerly unavailable due to ORV use. Six years of data collected by Strauss et al. (1986) in Barnstable, MA show that in their study area, the number of fledglings per nesting pair of plovers in an area with only light pedestrian use was 0.67, compared with 0.32 in an adjacent area with heavy ORV use. Their study also shows that while adult plovers will often move their chicks to feeding habitat with lower levels of disturbance, chicks moved more than 200 meters have half the probability of fledging than those moved less than 200 meters.

Determination: (Check One)

This use is compatible X This use is not compatible

The following stipulations are required to ensure compatibility:

As identified in the March, 1988 Environmental Assessment for the Management of Piping Plover on Toms Cove Hook, the FEIS, and the station Master Plan, from March 15 through August 31, a total of 18 vehicles at any one time will be permitted in the 1.5 mile ORV zone and from September 1 through March 14, a total of 48 vehicles at any one time will be permitted in the 4.0 mile beach ORV zone. In addition, a portion of the 1.5 mile zone will be subject to closure to all public access from March 15 through August 31 if piping plovers establish nesting territory within this zone.

Justification:

The 1.5 mile ORV zone in recent years has provided little nesting habitat as the majority of the beach is subject to frequent overwashes. The vehicle limitations allow for periods of uninterrupted feeding by shorebirds, gulls, and terns present in the area.

Closure of the 2.5 mile zone from March 15 through August 31 provides maximum protection to prime nesting habitat for piping plovers, as well as, least terns, common terns, and oystercatchers. The refuge contains over 10 miles of beach habitat which is closed to public vehicles and is limited to pedestrian use. This area along with the cove side of Toms Cove Hook provides excellent feeding and resting habitat for shorebirds, gulls, terns, and other wildlife.

Prepared by: John D. Schroer, Refuge Manager May 12, 1994
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Reviewed by:
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